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09/916,095	07/26/2001	Garry Chinn	M-9333 US	8448

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EXAMINER	
TRAN, QUOC A	

ART UNIT	PAPER NUMBER
2176	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/916,095	CHINN ET AL.	
	Examiner	Art Unit	
	Tran A. Quoc	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,7-15,18-21 and 23-63* is/are pending in the application.

4a) Of the above claim(s) *13-15, 18-20, and 44-63* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3, 7-12, 21, and 23-43* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

4/26/07

DETAILED ACTION

1. This is a **Final Rejection** in response to the Amendment/Remarks filed on February 02, 2007, to the original application filed 07-26-2001.

2. Claims 1-3, 7-15, 18-21, and 23-63 are currently pending. Claims 13-15, 18-20 and 44-63 are withdrawn from consideration. Applicant has canceled claims 4-6, 16-17, and 22. Claims 1-3, 7-12, 21, and 23-43 are rejected.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> ***(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.***

4. **Claims 1-3, 7-12, ~~and 21-43~~ 21 and 23-43 rejected under 35 U.S.C. 103(a) as being unpatentable over Boloker et al US 20020194388A1-Provisional application No. 60/251,085 filed Dec. 4, 2000 (hereinafter Boloker), in view of Lavi et al. US 20020196679A1 Provisional No. 60/275,598 filed Mar. 13, 2001 (hereinafter Lavi).** DH

Regarding **independent claim 1**, Boloker teaches:

a method of browsing content available on a communication network, the method comprising the steps of:

(See Boloker para 101, teaching Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser.

providing a navigation tree comprising a semantic, hierarchical structure, and having one or more paths associated with content of a conventional markup language document and a grammar comprising vocabulary including one or more keywords;

Also, see Boloker para 13, teaching DOM (Document Object Model) and MVC (Model-View-Controller) framework that enables a user to interact in parallel with the same information via a multiplicity of channels, devices, and/or user interfaces, while presenting a unified, synchronized view of such information across the various channels, devices and/or user interfaces supported by the multi-modal browser.

receiving a request in form of speech to access the content.

Also, see Boloker para 81, teaching a spoken request from the user cause the system to update its behavior to switch from visual to spoken interaction.

Using the broadest reasonable interpretation, Examiner equated the claimed **traversing a path in the navigation tree to retrieve content** as equivalent to DOM Queries, and the claimed **content related to the one keyword** as equivalent to DOM is a platform and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure and style of documents as taught by Boloker.)

In addition, Boloker does not explicitly teach, but Lavi teaches:

> **determining if the speech request for accessing the content includes one of the keywords of the vocabulary to find a match therewith; and responsive to the request, traversing a path in the navigation tree to retrieve content related to the one keyword in the speech request only if the request includes at least one keyword of the vocabulary.**

(See Lavi para 20, teaching a method for understanding a natural language text, comprising performing the following selectively in a statistical manner: attempting to extract at least one value belonging to a semantic category from a natural language text or a form thereof; and if a result of the attempting complies with a predetermined criterion, attempting to extract, based on the result, at least one value belonging to another semantic category of a different hierarchical level than the semantic category, else performing at least one action from a group of actions including: asking a submitter of the text a question whose content depends on the result and giving up on understanding the natural language text. Using the broadest reasonable interpretation the claimed find a match as equivalent to value belonging to a semantic category from a natural language text or a form thereof as taught by Lavi.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of determining if the speech request for accessing the content includes one of the keywords of the vocabulary to find a match therewith; and responsive to the request, traversing a path in the navigation tree to retrieve content related

to the one keyword in the speech request only if the request includes at least one keyword of the vocabulary as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **independent claim 21**, Boloker teaches:

> **a method of browsing content available on a communication network, the method comprising the steps of: navigating a navigation tree derived, from a document having content in conventional markup language format the navigation tree having a plurality of nodes:**

(See Boloker para 101, teaching Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser.

Also, see Boloker para 81, teaching programmers can build documents, navigate their structure, and add, modify, or delete elements and content. Virtually, anything found in an HTML or XML document can be accessed, changed, deleted, or added using DOM.)

In addition, Boloker does not explicitly teach, but Lavi teaches:

> **and being associated with a grammar comprising a vocabulary, and corresponding rules; visiting a first node in the navigation tree; moving from the first node to a second node in the navigation tree in response to a user request in form of speech, the second node having at least one keyword identifying content held in the second node; and expanding the grammar by adding to the vocabulary, the keyword of the second node.**

(See Lavi para 20, teaching a method for understanding a natural language text, comprising performing the following selectively in a statistical manner: attempting to extract at least one value belonging to a semantic category from a natural language text or a form thereof; and if a result of the attempting complies with a predetermined criterion, attempting to extract, based on the result, at least one value belonging to another semantic category of a different hierarchical level than the semantic category, else performing at least one action from a group of actions including: asking a submitter of the text a question whose content depends on the result and giving up on understanding the natural language text. Using the broadest reasonable interpretation the claimed **corresponding rules** as equivalent to value belonging to a semantic category from a natural language text or a form thereof as taught by Lavi.

Also, see Lavi para 110, teaching an additional hierarchical level so that the (four) semantic categories include an overall category depending on overall category value and a different subcategory classifier 420 is selected depending on the pre-subcategory value, Further added hierarchical levels can be processed in a complementary manner. Using the broadest reasonable interpretation the claimed **expanding the grammar by adding to the vocabulary,**

the keyword of the second node as equivalent to added hierarchical levels can be processed in a complementary manner as taught by Lavi.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of and being associated with a grammar comprising a vocabulary, and corresponding rules; visiting a first node in the navigation tree; moving from the first node to a second node in the navigation tree in response to a user request in form of speech, the second node having at least one keyword identifying content held in the second node; and expanding the grammar by adding to the vocabulary, the keyword of the second node as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **independent claim 39,** the rejection of claim 21 is fully incorporated, and is rejected along the same rationale. In addition, Boloker teaches:

indicating that the first node is visited by providing a first message.

(See Boloker para 89, teaching UI Logical events are device independent user interface events such as focus change messages or element triggering notifications. Mutation events are events caused by any action, which modifies the structure of the document.

indicating that no user request has been received by the providing a second message.

Also, see Boloker para 184, teaching the DOM interfaces 42a and 42b for each View comprise supporting mechanisms for controlling the browsers 42, 43 and mechanisms for event notification.

Also, see Boloker para 81, teaching upon failure of the user to respond to a spoken prompt, the system revert to a visual interface--an implicit assumption that the user is in environment where speech interaction is inappropriate. Using the broadest interpretation, Examiner equates the claimed as equivalent to event notification ads taught by Boloker.)

Regarding **claims 2, and 9,** Boloker does not explicitly teach, but Lavi teaches:

dynamically changing the vocabulary based on the path traversed in the navigation tree; and narrowing the vocabulary of the grammar if the request does not include at least one keyword of the vocabulary.

(See Lavi para 97, teaching dynamic processes are adaptable based on the results of earlier steps. The methods illustrated in FIGS. 8, 9, and 10 each include steps, which are influenced by the

results of the previous steps. Each of the dynamic aspects illustrated in FIGS. 8, 9, and 10 can be separately implemented, and the tokens become part of the input for the next extraction(s) and are therefore termed syntactic tokens. In FIG. 9, more than one extractor 420 or more than one pseudo extractor 425 is available for the same semantic category and the selection of extractor 420 or pseudo extractor 425 depends on the results of previous extractions. In FIG. 10, the dialog with a submitter can vary based on the results (including unsuccessful or no results) of previous extractions.

Also, see Lavi para 20, teaching a method for understanding a natural language text, comprising performing the following selectively in a statistical manner: attempting to extract at least one value belonging to a semantic category from a natural language text or a form thereof; and if a result of the attempting complies with a predetermined criterion, attempting to extract, based on the result, at least one value belonging to another semantic category of a different hierarchical level than the semantic category, else performing at least one action from a group of actions including: asking a submitter of the text a question whose content depends on the result and giving up on understanding the natural language text. Using the broadest reasonable interpretation the claimed **narrowing the vocabulary** as equivalent to a statistical manner: attempting to extract at least one value belonging to a semantic category from a natural language text or a form thereof as taught by Lavi.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of dynamically changing the

vocabulary based on the path traversed in the navigation tree; and narrowing the vocabulary of the grammar if the request does not include at least one keyword of the vocabulary as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claim 3,** Boloker does not explicitly teach, but Lavi teaches:

retrieving the content according to the one or more rules corresponding the one keyword included, in the request.

(See Lavi para 20, teaching a method for understanding a natural language text, comprising performing the following selectively in a statistical manner: attempting to extract at least one value belonging to a semantic category from a natural language text or a form thereof; and if a result of the attempting complies with a predetermined criterion, attempting to extract, based on the result, at least one value belonging to another semantic category of a different hierarchical level than the semantic category, else performing at least one action from a group of actions including: asking a submitter of the text a question whose content depends on the result and giving up on understanding the natural language text. Using the broadest reasonable interpretation the claimed **rules** as equivalent to value belonging to a semantic category from a natural language text or a form thereof as taught by Lavi.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of retrieving the content according to the one or more rules corresponding the one keyword included, in the request as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claims 7-9,** Boloker does not explicitly teach, but Lavi teaches:

> **traversing a path in the navigation tree to retrieve content related to a keyword selected from said one or more other keywords included in the prompt, wherein proving a prompt including one or more other keywords of the vocabulary if a match for the one key is not found, and narrowing the vocabulary of the grammar if the request does not include at least one key word of the vocabulary**

(See Lavi para 20, teaching a method for understanding a natural language text, wherein value belonging to a semantic category from a natural language text or a form thereof; at least one value belonging to another semantic category of a different hierarchical level than the semantic category, else performing at least one action from a group of actions including: asking a

submitter of the text a question whose content depends on the result and giving up on understanding the natural language text.

Also, see Lavi para 112, teaching to resolve an ambiguity, provide a missing piece of information, or restate the submission. The answers received from the submitter via the dialog augments previous extraction results so as to aid in understanding the natural language text. The term augments is used to include one or more of the following: clarifies, supplements, pinpoints, expands, narrows, etch, i.e. the answers from the dialog allows the text to be better understood than had the dialog not taken place and only the previous extraction results were available.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of traversing a path in the navigation tree to retrieve content related to a keyword selected from said one or more other keywords included in the prompt, wherein proving a prompt including one or more other keywords of the vocabulary if a match for the one key is not found, and narrowing the vocabulary of the grammar if the request does not include at least one key word of the vocabulary as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claims 10-11,** Boloker does not explicitly teach, but Lavi teaches:

> **providing a prompt including one or more keywords of the narrowed vocabulary; and traversing a path in the tree to retrieve content related to a keyword selected from said one or more keywords of the narrowed vocabulary; further comprising the step of expanding the vocabulary of grammar based on the path traversed in the navigation tree.**

(See Lavi para 20, teaching a method for understanding a natural language text, wherein value belonging to a semantic category from a natural language text or a form thereof; at least one value belonging to another semantic category of a different hierarchical level than the semantic category, else performing at least one action from a group of actions including: asking a submitter of the text a question whose content depends on the result and giving up on understanding the natural language text.

Also, see Lavi para 112, teaching to resolve an ambiguity, provide a missing piece of information, or restate the submission. The answers received from the submitter via the dialog augments previous extraction results so as to aid in understanding the natural language text. The term augments is used to include one or more of the following: clarifies, supplements, pinpoints, expands, narrows, etch, i.e. the answers from the dialog allows the text to be better understood than had the dialog not taken place and only the previous extraction results were available.

Also, see Lavi para 97, teaching dynamic processes are adaptable based on the results of earlier steps, and the tokens become part of the input for the next extraction(s) and are therefore termed syntactic tokens, wherein the dialog with a submitter can vary based on the results (including unsuccessful or no results) of previous extractions.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of providing a prompt including one or more keywords of the narrowed vocabulary; and traversing a path in the tree to retrieve content related to a keyword selected from said one or more keywords of the narrowed vocabulary; further comprising the step of expanding the vocabulary of grammar based on the path traversed in the navigation tree as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claim 12,** Boloker teaches:

the conventional markup language is Hyper Text Markup Language.

(See Boloker para 101, teaching Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser.)

Regarding **claim 23,** Boloker does not explicitly teach, but Lavi teaches:

providing an error message if the user request is not recognize.

(See Lavi para 161, teaching value is still unknown, the results are considered insufficient.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of providing an error message if the user request id not recognize as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claim 24**, the rejection of claim 1 is fully incorporated.

Regarding **claim 25**, the rejection of claim 1 is fully incorporated. In addition,

Boloker does not explicitly teach, but Lavi teaches:

for each selected keyword, assigning a value to the selected keyword based on how similar selected keyword is to the request; and recognizing the keyword with the highest value.

(See Lavi para 20, teaching a method for understanding a natural language text, comprising performing the following selectively in a statistical manner: attempting to extract at least one value belonging to a semantic category from a natural language text or a form thereof; and if a result of the attempting complies with a predetermined criterion, attempting to extract, based on the result, at least one value belonging to another semantic category of a different hierarchical level than the semantic category, else performing at least one action from a group of actions including: asking a submitter of the text a question whose content depends on the result and giving up on understanding the natural language text. Using the broadest reasonable interpretation the claimed **assigning a value** as equivalent to value belonging to a semantic category from a natural language text or a form thereof as taught by Lavi.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of assigning a value to the selected keyword based on how similar selected keyword is to the request; and recognizing the keyword with the highest value as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claim 26**, Boloker does not explicitly teach, but Lavi teaches:

resolving an ambiguity in recognizing the request if the selected keyword with the highest value is below a recognition threshold.

(See Lavi para 162, teaching a weighted grade corresponding to the highest graded operation is calculated by a simple formula giving equal weights to each semantic category and the weighted grade is checked to see whether the weighted grade is above a given threshold.

Also, see Lavi para 112, teaching to resolve an ambiguity, provide a missing piece of information, or restate the submission. The answers received from the submitter via the dialog augments previous extraction results so as to aid in understanding the natural language text. The term augments is used to include one or more of the following: clarifies, supplements, pinpoints, expands, narrows, etch, i.e. the answers from the dialog allows the text to be better understood than had the dialog not taken place and only the previous extraction results were available.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of resolving an ambiguity in recognizing the request if the selected keyword with the highest value is below a recognition threshold as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different

hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claim 27**, Boloker does not explicitly teach, but Lavi teaches:

prompting the user to choose from one of the selected keywords.

(See Lavi para 170, teaching to prompt the submitter to enter the car group or a closed question is posed including as choice all possible car groups (as predefined). Once the answer is received, the last required parameter is known and results can be output.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, and Brown's automatic speech recognizer (ASR) utilizing, the syntax generated by the grammar compiler and generating output of the ASR is applied to a natural language interpreter, to include a means of prompting the user to choose from one of the selected keywords as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claim 28,** Boloker does not explicitly teach, but Lavi teaches:

expanding the grammar by adding to the vocabulary any keywords associated with nodes proximate the first node.

(See Lavi para 110, teaching an additional hierarchical level so that the (four) semantic categories include an overall category depending on overall category value and a different subcategory classifier 420 is selected depending on the pre-subcategory value, further added hierarchical levels can be processed in a complementary manner. Using the broadest reasonable interpretation the claimed **expanding the grammar by adding to the vocabulary** as equivalent to added hierarchical levels can be processed in a complementary manner as taught by Lavi.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of expanding the grammar by adding to the vocabulary any keywords associated with nodes proximate the first node as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claims 29-34,** Boloker does not explicitly teach, but Lavi teaches:

grammar is generated after the first node is visited.

(See Lavi para 22, teaching receiving a natural language text; processing each at least two semantic categories, the each on a different hierarchical level.

Also, see Lavi para 71, teaching the text can be represented by a single hierarchical structure, and with each subtext represented by a separate hierarchical structure that can be processed either in parallel or sequentially.

grammar is generated before the first node is visited, and building a greeting based on the key word of the second node.

Also, see Lavi para 71, teaching the text can be represented by a single hierarchical structure, and with each subtext represented by a separate hierarchical structure that can be processed either in parallel or sequentially.

Also, see Lavi para 170, teaching to prompt the submitter to enter the car group or a closed question is posed including as choice all possible car groups (as predefined). Once the answer is received, the last required parameter is known and results can be output.

generating a prompt based on the portion of the content included in the first node; and playing the prompt to provide a plurality of options to select from the portion of the content included in the first node.

Also, see Lavi para 71, teaching the text can be represented by a single hierarchical structure, and with each subtext represented by a separate hierarchical structure that can be processed either in parallel or sequentially.

Also, see Lavi para 170, teaching to prompt the submitter to enter the car group or a closed question is posed including as choice all possible car groups (as predefined). Once the answer is received, the last required parameter is known and results can be output.

> **wherein the first node is a routing node, which refers to other nodes in the navigation tree; and generating a prompt based on the other nodes referred to by the first node; and playing the prompt to provide a plurality of options for moving from the first node to one of the other nodes.**

Also, see Lavi para 20, teaching a method for understanding a natural language text, comprising performing the following selectively in a statistical manner: attempting to extract at least one value belonging to a semantic category from a natural language text or a form thereof; and if a result of the attempting complies with a predetermined criterion, attempting to extract, based on the result, at least one value belonging to another semantic category of a different hierarchical level than the semantic category, else performing at least one action from a group of actions including: asking a submitter of the text a question whose content depends on the result and giving up on understanding the natural language text. Using the broadest reasonable interpretation the claimed **routing node** as equivalent to value belonging to a semantic category from a natural language text or a form thereof as taught by Lavi.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of grammar is generated after the first

node is visited grammar is generated before the first node is visited, and building a greeting based on the key word of the second node generating a prompt based on the portion of the content included in the first node; and playing the prompt to provide a plurality of options to select from the portion of the content included in the first node wherein the first node is a routing node, which refers to other nodes in the navigation tree; and generating a prompt based on the other nodes referred to by the first node; and playing the prompt to provide a plurality of options for moving from the first node to one of the other nodes as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claims 35-38,** Boloker does not explicitly teach, but Lavi teaches:

> **wherein the first node is a form node associated with one or more editable fields; generating a prompt based on the editable fields; playing the prompt to provide a plurality of options for selecting from the editable fields; and moving through the editable fields in a prearranged order.**

(See Lavi para 25, teaching a dialog management module configured to dialog with a submitter of the natural language text; at least one evaluation module configured to evaluate values belonging to the at least two semantic categories.

Also, see Lavi para 35, discloses selecting subcategory extractor to extract at least one subcategory value; choosing one of the at least one extracted subcategory values; evaluating the at least one identified parameter type in relation to the chosen subcategory value; and concluding that the natural language text is understood.

Also, see Lavi para 71, teaching the text can be represented by a single hierarchical structure, and with each subtext represented by a separate hierarchical structure that can be processed either in parallel or sequentially.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include the first node is a form node associated with one or more editable fields; generating a prompt based on the editable fields; playing the prompt to provide a plurality of options for selecting from the editable fields; and moving through the editable fields in a prearranged order as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

Regarding **claim 40,** Boloker teaches:

providing a third message with one or more options if no user request is received in response to the second message.

(See Boloker para 184, discloses DOM interface includes event notification.)

Regarding **claim 41,** Boloker does not explicitly teach, but Lavi teaches:

providing a third message with one or more options to select from, the portion of the content associated with the content node.

(See Boloker para 184, discloses DOM interface includes event notification.)

Regarding **claim 42,** Boloker teaches:

wherein the first node is a routing node, which refers to the nodes of the navigation tree, the method further comprising the step of: providing a third message with one or more options for moving to the other nodes.

(See Boloker para 184, discloses DOM interface includes event notification.)

Regarding **claim 43,** Boloker does not explicitly teach, but Lavi teaches:

wherein the first node is a form node having one or more editable. fields, the method further comprising the step of: providing a third message, with one or more options to from one or more editable fields.

(See Lavi para 170, discloses prompt the submitter to enter the car group or a closed question is posed including as choice all possible car groups (as predefined). Once the answer is received,

the last required parameter is known and results can be output. (See Lavi see Lavi para 20, teaching a method for understanding a natural language text, comprising performing the following selectively in a statistical manner: attempting to extract at least one value belonging to a semantic category from a natural language text or a form thereof; and if a result of the attempting complies with a predetermined criterion, attempting to extract, based on the result, at least one value belonging to another semantic category of a different hierarchical level than the semantic category, else performing at least one action from a group of actions including: asking a submitter of the text a question whose content depends on the result and giving up on understanding the natural language text. Using the broadest reasonable interpretation the claimed **routing node** as equivalent to value belonging to a semantic category from a natural language text or a form thereof as taught by Lavi.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified Boloker 's Web/HTML browser, C-HTML browser, HDML browser, VoiceXML voice browser using DOM (Document Object Model) and MVC (Model-View-Controller) framework, to include a means of wherein the first node is a routing node which refers to the nodes of the navigation tree, the method further comprising the step Of: providing a third message with one or more options for moving to the other nodes as taught by Lavi. One of ordinary skill in the art would have been motivated to perform such a modification to provide user the improvement in web-based voice dialog interface, wherein the extraction of one part of a text which belongs to one semantic category assists in the extraction of another part which belongs to a semantic category of a different hierarchical level and the affected based on the results of earlier steps, thereby introducing a dynamic aspect (see Lavi para 19).

6. It is noted that any citations to specific, pages, columns, lines, or figures in the prior art references and any interpretation of the references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. See, MPEP 2123.

Response to Remarks

7. The Remarks filed on 02-27-2007 has been fully considered but are moot but in view of the new ground(s) of rejection.

To address Applicant newly amended portions, the Examiner introduces Boloker, in view of Lavi (see above rejection for details).

In addition, it is noted the Remarks page 11 bottom half, the Applicant discloses, "Claims 16 and 17 have been deleted." and Applicant's Claims Amendment page 5, " 16 and 17 (canceled)". The Examiner assumes this is a typo error and in the interest of compact prosecution, the application is further examined against the prior art with the assumption that claims 16-17 are canceled and not belonging to the Non-elected group at this time (see above rejection for details).

For at least all the above evidence, therefore the Examiner respectfully maintains the rejection at this time.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc A. Tran whose telephone number is 571-272-8664. The examiner can normally be reached on Monday through Friday from 9 AM to 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Herndon R. Heather can be reached on 571-272-4136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Patent Examiner
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April 26, 2007

Doug Hutton
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